

MID March

Work Order ID 80816

80816

Page 1

Wednesday, February 29, 2012 3:27:50 PM

Item ID: D3196-3

Accept

N9000040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Bar

Start Date: 2/29/2012 Start Qty: 6.00

6

Cust Item ID:

Required Date: 3/13/2012 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: *CMK*

Date: *12-02-09*

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D3196

Rev C

100

0.00

100

BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut blank: (0.75" x 1.50") x 34.750" long Bar

ET 12-03-08

110

0.00

110

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine D3196-3 as per Folio FA339 and Dwg D3196 Identify as D3196-32-Debur

CMK 12/03/08

6

120

0.00

120

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

CMK 12/03/08

6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 80816

Wednesday, February 29, 2012 3:27:50 PM

80816

Page 2

Item ID: D3196-3

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bar

Start Date: 2/29/2012 Start Qty: 6.00

6

Cust Item ID:

Required Date: 3/13/2012 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00

130

QC

Memo

0.00

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00

140

HandFinish

Memo

0.00

Hand Finishing

150

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00

150

Powdercoat

Memo

0.00

Powder Coating

START TIME: 11h10 320°F OVEN TEMPERATURE:
11h40 FINISH TIME:

11h8 489.

6X Ø M-12/03/09

6 & (JP) BL 12/03/12.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 80816

Wednesday, February 29, 2012 3:27:50 PM

80816

Page 3

Item ID: D3196-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bar

Start Date: 2/29/2012 Start Qty: 6.00

6

Cust Item ID:

Required Date: 3/13/2012 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run HoursTool ID Tool # Plan
Code Accept Reject Reject Insp.
Qty Qty Number Stamp

160

QC3- Inspect Part Finish

0.00

160

QC

Memo

0.00

Quality Control

Comp 3/12 (6)

170

Identify as per dwg & Stock Location ST 260 0.00***170***

Packaging

Memo

0.00

Packaging

6x 50 12-03-12

180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Memo

0.00

Quality Control

*12/3/13**12-03-13*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, February 29, 2012 3:27:50 P

Page 1

Work Order ID: 80816

Parent Item: D3196-3

Parent Item Name: Bar

Start Date: 2/29/2012

Required Date: 3/13/2012

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP Rev: A New Issue 05-11-08 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6B0.750X01.500

Purchased

No

100

f

4.4000

2.89

18.252632

6061-T6 Bar .750 X 1.50

120961

18.25

BT 12-03-08

Location

Loc Qty

Loc Code

MAT002

4.4

116604

1.5

118182

2

118844

0.786

119513

0.114

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

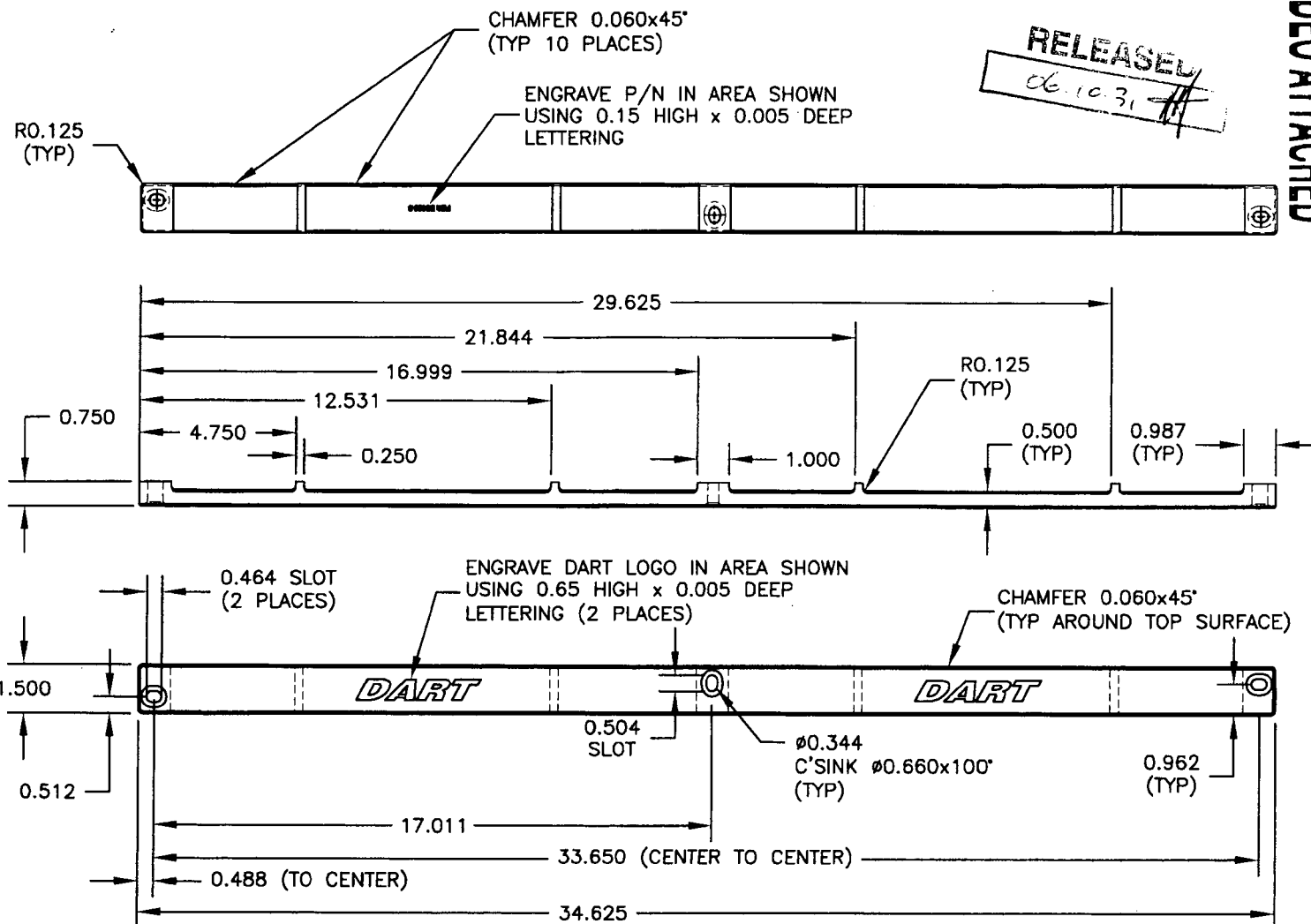
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART

DEO ATTACHED

RELEASED
06.10.31



D3196-3 BAR

- 1) MATERIAL: 6061-T6/T651 ALUMINUM (QQ-A-200/8 OR QQ-A-225/8)
(REF DART SPEC. M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: ACID ETCH AND ALODINE PER DART QSI 005 4.1
POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

DESIGN	DRAWN BY	DART AEROSPACE LTD
06.10.31	06.10.31	HAWKESBURY, ONTARIO, CANADA
CHECKED 06.10.31	APPROVED 06.10.31	DRAWING NO. D3196
DATE	TITLE	SHEET 2 OF 3
06.10.31	BAR	SCALE 1:5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D3196	TITLE BAR	REV. C	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D3196-C-1	SHEET NO. SHEET 1 OF 2	SCALE NTS
DRAWN <i>ASS</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 08.08.27	DATE 08.08.28	DATE 08.08.29	DATE 08.08.29	DATE 08.09.04		

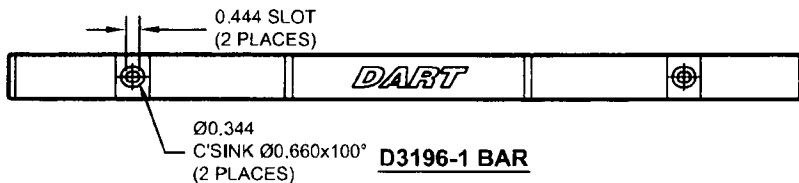
SHEET 1 MODIFY SLOT DIMENSIONING ON D3196-1 AS SHOWN:

IS:



D3196-1 BAR

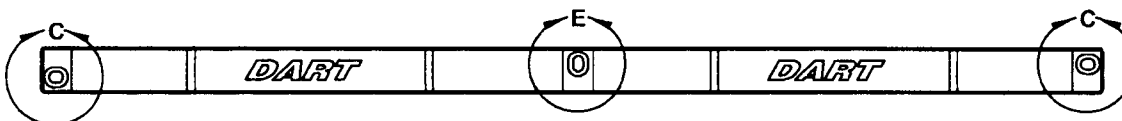
WAS:



D3196-1 BAR

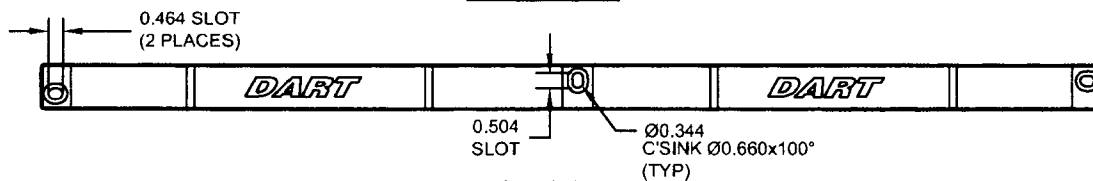
SHEET 2 MODIFY SLOT DIMENSIONING ON D3196-3 AS SHOWN:

IS:



D3196-3 BAR

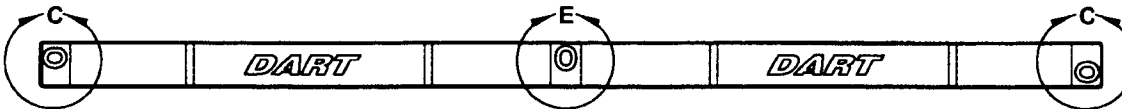
WAS:



D3196-3 BAR

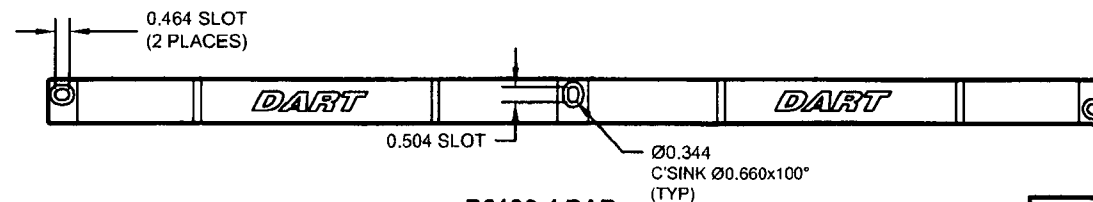
SHEET 3 MODIFY SLOT DIMENSIONING ON D3196-4 AS SHOWN:

IS:



D3196-4 BAR

WAS:



D3196-4 BAR

#801816

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

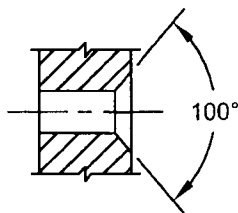
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

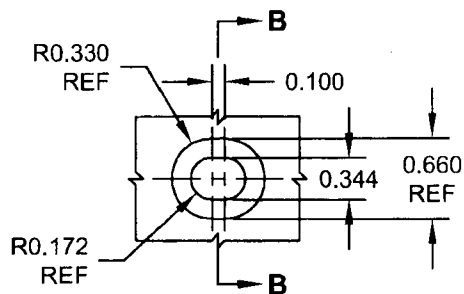
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

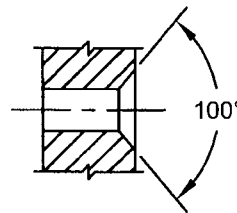
DRAWING NO. D3196	TITLE BAR	REV. C	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D3196-C-1	SHEET NO. SHEET 2 OF 2	SCALE NTS
DRAWN <i>ASS</i>	CHECKED <i>[Signature]</i>	MFG. APPR. <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DE APPR. <i>[Signature]</i>		
DATE 08.08.27	DATE 08.08.28	DATE 08.08.29	DATE 08.08.29	DATE 08.09.04		



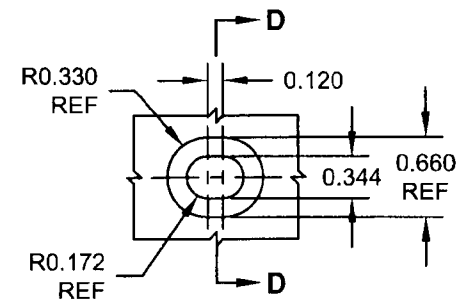
SECTION B-B



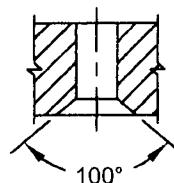
DETAIL A



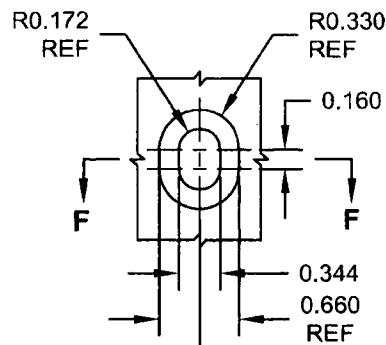
SECTION D-D



DETAIL C



SECTION F-F



DETAIL E

#80816

NOTE: THIS CHANGE HAS BEEN DONE TO CLARIFY SLOT DIMENSIONS ONLY. NO CHANGES HAVE BEEN MADE TO THE PARTS
SEE NCR 08-051 FOR FURTHER INFORMATION
ALL OTHER INFORMATION REMAINS UNCHANGED

COPYRIGHT © 2003 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 80816
Description: Bar		Part Number: D3196-3
Inspection Dwg: D3196	Rev: C	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article
 ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
34.625	+/-0.010	34.625	—		M-type M6-04	
33.650	+/-0.005	33.650	—		"	
0.488	+/-0.005	.488	—		Vern M1-06	
17.011	+/-0.010	17.011	—		M-type M6-04	
0.512	+/-0.005	.510	—		Vern M6-06	
1.500	+/-0.010	1.494	—		"	
0.464	+/-0.010	.462	—		"	
0.504	+/-0.010	.502	—		"	
Ø0.344	+0.006/-0.001	Ø.344	—		"	
Ø0.660 x 100°	+0.008/-0.001 x 0.5°	Ø.668 x 100°	—		"	
0.962	+/-0.005	.961	—		"	
0.750	+/-0.010	.745	—		"	
4.750	+/-0.010	4.744	—		"	
12.531	+/-0.010	12.531	—		M-type M6-04	
16.999	+/-0.010	16.999	—		"	
21.844	+/-0.010	21.844	—		"	
29.625	+/-0.010	29.625	—		"	
0.250	+/-0.010	.249	—		Vern M1-06	
1.000	+/-0.010	1.000	—		"	
R0.125	+/-0.010	R.125	—		"	
0.987	+/-0.010	.984	—		"	
0.060 x 45°	+/-0.010 x 0.5°	.055 x 45°	—		"	

Measured by: <i>AK</i>	Audited by: <i>TA</i>	Prototype Approval:	N/A
Date: 12/03/08	Date: 12/3/9	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.04.20	New Issue	KJ/RF	
B	06.10.24	Dwg Rev. updated	KJ/JLM	
C	07.05.08	Dwg Rev. updated	KJ/JLM	<i>AK</i>